

Curriculum Vitae	Jung-Eun Lee	July, 2012
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Academic preparation:

B.S., Earth Science Education (Minor: Chemistry), 1996.

M.A., Science Education, Seoul National University, 1998.

Ph.D., Earth and Planetary Science, University of California, Berkeley, 2005.

Postdoc, University of California, Berkeley, 2006-2008.

Postdoc, University of Chicago, 2008-2010.

Employment:

Scientist III, NASA Jet Propulsion Laboratory, 2011-.

Instructor, University of Chicago, 2010, Global Carbon Cycle with an emphasis on terrestrial systems.

Professional Activities:

Recipient, W. S. Cooper Award of the Ecological Society of America 2012

Publications:

25. Frankenberg, C., D. Wunch, G. Toon, C. Risi, R. Scheepmaker, **J.-E. Lee**, and J. Worden, "Water vapor isotopologues retrievals from high resolution GOSAT short-wave infrared spectra", *Atmos. Meas. Tech.*, submitted.
24. Guanter L., M. Rossini, R. Colombo, M. Meroni, C. Frankenberg, **J.-E. Lee**, A. Porcar-Castell, "Using field measurements to assess the monitoring of chlorophyll fluorescence from GOSAT-FTS satellite data," *Remote Sensing of Environment*, submitted.
23. Parazoo, N.C., K. Bownan, C. Frankenberg, **J.-E. Lee**, J.B. Fisher, J. Worden, D. Jones, J. Berry, G.J. Collatz, I.T. Baker, M. Jung, J. Liu, "Rising CO₂ associated with GPP loss during 2010 Amazon drought," *Geophys. Res. Lett.*, submitted.
22. **Lee J.-E.**, C. Frankenberg, S. Saatchi, C. K. Boyce, L. Guanter, C. Van der Tol, E. Morrow, J. B. Fisher, J. A. Berry, J. Worden, G. Badgley, "GOSAT fluorescence captures response of Amazonian productivity to seasonality and drought." *P. Natl. Acad. Sci. USA.*, in review.
21. **Lee, J.-E.**, B.R. Lintner, J. D. Neelin, X. Jiang, C. K. Boyce, J. B. Fisher, J. T. Perron, T. L. Kubar, J. Lee, J. Worden, "Reduction of precipitation variability via plant transpiration," *Geophys. Res. Lett.*, in review.
20. **Lee, J.-E.**, I., C. Risi, I. Fung, J. Worden, R. Scheepmaker, B.R. Lintner, and C. Frankenberg, "Asian monsoon hydrology investigated with LMDZ GCM and two satellite measurements (TES and SCIAMACHY) of water vapor isotopes," *J. Geophys. Res.*, in press.
19. Feakins S. J., S. Warny, **J.-E. Lee**, "Plant leaf waxes record Antarctic precipitation 20 to 15 million years ago", *Nature Geoscience*, DOI: 10.1038/NGEO1498 (2012).
18. Lintner, B.R., M. Biasutti , N. Diffenbaugh , **J.-E. Lee** , M. Niznik , K. Findell, "Amplification of wet and dry month occurrence over tropical land regions in response to global warming," *J. Geophys. Res.*, 117, D11106, doi:10.1029/2012JD017499 (2012).

17. Worden, J., S. Kulawik, C. Frankenberg, K. Bowman, V. Payne, K. Cady-Peirara, K. Wecht, **J.-E. Lee**, D. Noone, and C. Risi, "Profiles of CH₄, HDO, H₂O, and N₂O with improved lower tropospheric vertical resolution from Aura TES radiances," *Atmospheric Measurement Techniques*, 5, 397–411, doi:10.5194/amt-5-397-2012 (2012).
16. **Lee, J.-E.**, B.R. Lintner, C.K. Boyce, and P.J. Lawrence, "Land use change exacerbates tropical South American drought by sea surface temperature variability," *Geophy. Res. Lett.*, **38**, L19706, doi:10.1029/2011GL049066 (2011).
15. Frankenberg,C., J. B. Fisher, J. Worden, G. Badgley, S. S. Saatchi, **J.-E., Lee**, G.C. Toon, A. Butz, A. Kuze, T. Yokota, "New global observations of the terrestrial carbon cycle from GOSAT: Patterns of plant fluorescence with gross primary productivity", *Geophy. Res. Lett.*, **38**, L17706, doi:10.1029/2011GL048738 (2011).
14. Boyce, C.K., and **J.-E. Lee**, "Could land plant evolution have fed the marine revolution?" *Paleontological Research*, **15**, 100-105, (2011).
13. *Boyce, C. K., **J.-E. Lee**, T. S. Feild, T. J. Brodribb, and M. A. Zwieniecki. 2010. Angiosperms helped put the rain in the rainforests: The impact of plant physiological evolution on tropical biodiversity. *Annals of the Missouri Botanical Garden* 97: 527-540.
*Recipient of the W. S. Cooper Award of the Ecological Society of America
12. **Lee, J.-E.**, C.K. Boyce, "The impact of hydraulic capacity on water and carbon cycles in tropical South America," *J. Geophys. Res.*, 115, D23123, doi:10.1029/2010JD014568 (2010).
11. Boyce, C.K.* , and **J.-E. Lee**,* "A unique role for flowering plants in modifying tropical climate and biodiversity," *Proceedings of Royal Society, B.*, doi:10.1098/rspb.2010.0485 (2010). (*: equal contributions).
10. **Lee, J.-E.**, A. Swann, "Evaluation of using the "amount effect" to interpret speleothem data: Asian monsoon study," *IOP Conf. Series: Earth and Environmental Science*, 9, L23801 (2010).
9. **Lee, J.-E.**, R. Pierrehumbert, B. Lintner, and A. Swann, "Sensitivity of the stable water isotopic values on the convective parameterization schemes," *Geophy. Res. Lett.*, 36, L23801, doi:10.1029/2009GL040880 (2009).
8. **Lee, J.-E.**, K. Johnson, and I. Fung, "Precipitation over South America during the Last Glacial Maximum: An analysis of the "amount effect" with a water isotope-enabled General Circulation Model," *Geophy. Res. Lett.*, 36, L19701, doi:10.1029/2009GL039265 (2009).
7. **Lee, J.-E.**, I. Fung, D.J. DePaolo, B. Otto-Bliesner, "Water isotopes during the Last Glacial Maximum: New GCM calculations," *J. Geophys. Res.* 113, D19109, doi:10.1029/2008JD009859 (2008).
6. Angert, A., **J.-E. Lee**, and D. Yakir, "Seasonal variations in the isotopic composition of near surface water vapor in the Eastern-Mediterranean," *Tellus B*, doi:10.1111/j.1600-0889.2008.00357.x, 60B, 674-684 (2008).
5. **Lee, J.-E.**, and I. Fung, "Amount effect of water isotopes and quantitative analysis of post-condensation processes," *Hydrological Processes*, doi: 10.1002/hyp.6637 (2008).
4. **Lee, J.-E.**, I. Fung, D.J. DePaolo, C. Henning, "Analysis of the global distribution of water isotopes using the NCAR atmospheric general circulation model," *J. Geophys. Res.*, 112, D16306, doi:10.1029/2006JD007657 (2007).

3. **Lee, J.-E.**, R.S. Oliveira, T.E. Dawson, and I. Fung, "Root functioning modifies seasonal climate," *P. Natl. Acad. Sci. USA.*, 102, 17576-17581 (2005).
2. Kim, J., and **J.-E. Lee**, "A multi year regional climate hindcast for the western United States using the Mesoscale Atmospheric Simulation Model," *J. Hydrometeorol.*, 4, 878-890 (2003).
1. **Lee, J.-E.**, and B.J. Sohn, "Rainfall estimation over the Korean Peninsula from GMS-5 measurements of infrared radiation," *J. Korean Meteorol. Soc.*, 35, 20-29 (1999).

Service:

Reviewer, NSF, Oecologia, Earth and Planetary Science Letters, Geophysical Research Letters, Journal of Climate, Science, Paleoceanography, Journal of Geophysical Research-Atmosphere, Journal of Geophysical Research Biogeoscience, Climate of Past, Proceeding of National Academy of Science, Global Biogeochemical Cycle, Geoscientific Model Development.

Organizer, JPL Tropospheric Sounding, Assimilation, and Modeling group meeting (Spring 2011-), UCB Earth and Planetary Science Speaker's Program (Spring 2004)

Volunteer, JPL open house (2011), UC Berkeley Cal Day Physics Hands-on Lab (2004)

Teaching experience:

Instructor: Summer school on mountain ranges and high plateaus (Summer 2011)

Instructor: Global carbon cycle with an emphasis on terrestrial systems (Fall 2010)

Guest lecturer: Isotope biogeochemistry (Winter 2009 and 2010)

Graduate Student Instructor, Seoul National University (1996-1997): Introduction to atmospheric science

Intern teacher, Busok Girls' Middle School (Spring 1995)

Student:

Sarah Bang (Undergraduate student/University of Chicago/with Liz Moyer)

Invited talks:

2012: UC Santa Barbara; Korea Polar Research Institute

2011: UCLA; University of Washington; California Institute of Technology

2010: Yale University; Duke University; University of Southern California; Ohio State University; University of California, Berkeley; Workshop on the water vapor isotopologues in the atmosphere, Paris, France; Jet Propulsion Lab

2009: University of Michigan; Columbia University; Woods Hole Oceanographic Institution; Cornell University

2008: University of California, Irvine; University of Rochester; University of Chicago; California Institute of Technology; International Atomic Energy Agency

2007: University of Maryland, College Park

2005: NCAR Land Surface Working Group Meeting; NASA AMES

Other presentations:

2011: NCAR Land/Biogeochemistry Model Working Group meeting; Stanford University/NASA AURA meeting

2010: NCAR Land/Biogeochemistry Model Working Group meeting

2009: NCAR Atmospheric Model Working Group meeting; Global Energy and Water Cycle Experiment meeting; Canadian Institute For Advance Research meeting
2008: Goldschmidt meeting; Frontiers in Climate Science, University of Santa Barbara; Chapman water vapor conference
2006: AGU fall meeting
2004: BASIN Water isotope meeting; AGU fall meeting